

VIRYUZAYEV, Ye.D.; PLANOVSKIY, A.N.

Kinetic equations for calculating the efficiency of sieve-plate extraction columns. Zhur.prikl.khim. 36 no.2:295-298 F '63. (MIRA 16:3)

1. Moskovskiy institut khimicheskogo mashinostroyeniya.
(Extraction apparatus)

VERTUZAYEV, Ye.D.

Essence of the end effects observed in extraction solvents. Khim.
i tekhn. i masel 9 no.7:8-12 Jl '64.

(MIRA 17:12)

1. Moskovskiy institut khimicheskogo mashinostroyeniya.

VERTYACHIKH, A.

Use of conductometry for the automatic control of pulp basicity.
TSyet. met. 34 no.12:85-87 D '61. (MIRA 14:12)
(Flotation)
(Conductometric analysis)

VIRTYACHIKH, V.G., inzh.; DEMIDOV, V.Ya., inzh.; PAK, P.B., inzh.

Detection and removal of electric detonators and live cartridges.
Bezop.truda v prom. 6 no.6:18-19 Je '62. (MIRA 15:11)

1. Vostochnyy nauchno-issledovatel'skiy institut po bezopasnosti
rabot v gornoj promyshlennosti.

(Detonators—Safety measures)
(Electronic apparatus and appliances)

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859610004-7

VERTYACHIKH, V.G.; KOMAROV, V.S.

Explosion proof gaps in electric mine equipment. Vop. bezop.
(MIRA 17:2)
v ugol'. shakh. l:192-197 '59.

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859610004-7"

VERTYACHIKH, V.G.; BEZDENEZHNYKH, A.G.

Certain characteristics of industrial casings for explosion-proof equipment. Nauch. soob. VostNII no.3:87-92 '63.

Basis for standards on current leakage distances from electrical equipment in mines. Ibid.:93-102 '63.

(MIRA 17:5)

BEZDENEZHNYKH, A.G., inzh.; VERTYACHIKH, V.G., inzh.

Standardized norms for the distance of electrical leakage
along insulating components of explosionproof electrical
equipment. Vest. akhtraprom. 34 no.3:19-22 Mr '63.

(MIRA 16:8)
(Electricity in mining—Safety regulations)

KHORUNZHIY, V.A.; red.; RIBAS, Yu.M., red.; BORISEVICH, Z.S., red.;
VERTYACHIKH, V.G., red.; KOST'YEV, N.K., red.; NOVSESOV, N.S.,
red.; ZHIGULIN, Yu.V., red.; RAKOVICH, I.I., red.; RUVINSKIY,
V.A., red.; TULIN, V.S., red.; FETISOV, P.A., red.; FILIMONOV,
P.V., red.; IGLITSYN, I.L., red.; LARIONOV, G.Ye., tekhn.red.

[Rules for the manufacture of explosion-proof electric equipment]
Pravila izgotovleniya vzryvokazhishchennogo elektrooborudovaniia.
Moskva, Gos.energ.iзд-во, 1960. 54 p. (MIRA 13:11)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po avtoma-
tizatsii i mashinostroyeniyu.
(Electric apparatus and appliances)

VERTYACHIKH, V.G., inzh.

Explosion-proof attachment with a measuring instrument. Bezop.
truda v prom. 3 no.9:20-21 8 '59. (MIRA 13:2)

1. Vostochnyy nauchno-issledovatel'skiy institut po bezopasnosti
rabot v gornoy promyshlennosti.
(Electricity in mining)

VERTYANKIN, Vas.

Railroads - Kara Kum

Through the sands of the Kara Kum. Mol. kolkh. 20, No. 3, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Uncl.

1. VERTYANKIN, Vas.
2. t33R (600)
4. Kara Kum-Railroads
7. Through the sands of the Kara Kum. Mol. kolkh. 20 no. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

Translation from: Referativnyy Zhurnal, Geologiya, 1957, Nr 3,
p 85 (USSR) 15-1957-3-3038

AUTHORS: Avdonin, V. N., Vertyshkov, G. N.

TITLE: Amethyst from the Berezovsk^{ye} Gold Field in the
Urals (iz Berezovskogo zolotorudnogo
mestorozhdeniya na Urale)

PERIODICAL: Tr. Sverdl. gorn. in-ta, 1956, vol 26, pp 93-94

ABSTRACT: Two nests with crystals of apatite were discovered
in banded quartz-sulfide veins at Petropavlovsk.
The size of one nest is 6x20x35 cm, of the other
15x30x25 cm. Rock crystals and crystals of cal-
crite are also present in the nests. The amethyst
forms complex parallel intergrowths of fantastic
forms. Individual crystals form short prisms,
reaching 6 to 7 cm in length and 4 cm across.
The crystal forms m [109] R [1011], and r
[0111] were identified. The mineral is platy.

Card 1/2

15-1957-3-3038

Amethyst from the Berezovskiy Gold Field in the Urals

A complex pattern of twinning striae is visible on each crystal, the twins forming according to the Dauphine law (c-axis, the twinning axis). All specimens are strongly fractured and made turbid by small secondary inclusions. Only individual and comparatively small parts of the tips of crystals are transparent. The violet color of the amethyst is confined to narrow bands paralleling the edge of the rhombohedron; these bands impart a pale violet color to the whole mass of the crystal. The centers of the violet stain occur chiefly in the tip of the crystal. When the amethyst is heated for a brief period to 450° to 500° the color is not affected; continued heating at comparative low temperatures leads to fading of the amethyst color. Thus the violet color in quartz crystals cannot be used as an index of the temperature of its formation.

G.A.G.

Card 2/2

15-1957-3-3043

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 3,
p 86 (USSR)

AUTHOR: Vertushkov, G. N.

TITLE: A Limonite Geode from the Bakal Iron Deposit
(Zheoda limonita iz Bakal'skogo zhelezorudnogo
mestorozhdeniya)

PERIODICAL: Tr. Sverdl. gorn. in-ta, 1956, Nr 26, pp 94-98

ABSTRACT: The geode from the Bakal deposit is one of
the largest of its kind. In shape it is almost a
triaxial ellipsoid. The structure of the limonite
on the walls of the geode is quite different from
that of the mineral in the interior. The periphery
consists of earthy, porous limonite; the variety
in the interior is dense. The peripheral variety
is chiefly hydrogoethite and goethite. The interior

Card 1/2

15-1957-3-3043

A Limonite Geode from the Bakal Iron Deposit

part of the geode is composed of stalactitic limonite, most of which has the clear structure of goethite. The thermal curve indicates that it is typical goethite and, in part, hydrogoethite, with no other mineral admixtures. Druses of siderite crystals are found in very few places in the outer part of the geode. The internal surface of the geode is covered with radiating goethite. The lower part, occupying approximately one third of the cavity, contains a warped limonite crust, the edges of which are broken off. The author thinks that the geode may be a cavern, the walls of which began to form by deposition of limonite in the chamber. The chamber itself may have formed by solution of siderite. Later, solutions got into the hollow of the cavern through the walls and were filtered during their passage. Thus clean radiating goethite formed on the roof, but on the floor limonite crust appeared.

G. A. G.

Card 2/2

VERTYSHEVA, N.S.; LATKIN, V.F.; PROKHOROVA, A.A.; YEFIMOVA-SYAKINA, E.M.; PARASHCHENKO, S.F., kand.istor.nauk, red.; TRUBITSYNA, A.Y., kand.istor.nauk, red.; PLOTNIKOV, A.M., red.; KHLOBORDOV, V.I., tekhn.red.

[Collectivization of agriculture on the Kuban; collection of documents and materials] Kollektivizatsiya sel'skogo khoziaistva na Kubani; sbornik dokumentov i materialov. Krasnodar, Kraeodzarskoe knizhnoe izd-vo. Vol.1. 1918-1927 gg. 1959. 201 p. (MIRA 13:3)

1. Kommunisticheskaya partiya Sovetskogo Soyuza. Krasnodarskiy krayevoy komitet. Partiynyj arkhiv.
(Kuban--Agriculture, Cooperative)

BOKSHTEYN, S.Z.; KISHKIN, S.T.; NIKISHOV, A.S.; POLYAK, E.V.; SOLOV'YEVA, G.G.;
Prinimali uchastiyey: ARZHAKOV, V.M.; BULANOV, A.V.; VERTYUKOVA, L.G.;
KORABLEVA; MIRSKIY, L.M.; PODVOYSKAYA, O.N.; SAZONOVA, T.N.;
SOLONINA, O.P.; TITARENKO, I.I.; RINK, L.P.; KOZLOVA, M.N.;
YERMOLOVA, M.I.; MOROZ, L.M.

Aging of plastically deformed alloys. Metalloved. i term. obr.
(MIRA 16:5)
met. no. 5:40~44 My '63.
(Heat-resistant alloys--Hardening) (Deformations (Mechanics))

SOV/63-4-1-27/31

5(1, 3)

AUTHORS:

Vertyulina, L.N., Korshunov, I.A.

TITLE:

Polarographic Determination of Hexaethyl-di-Lead in Tetraethyl-Lead
(Polyarograficheskoye opredeleniye geksaetildisvintsa v
tetraetilsvintse)

PERIODICAL:

Khimicheskaya nauka i promyshlennost', 1959, Vol 4, Nr 1,
p 136 (USSR)

ABSTRACT:

The quantitative polarographic determination of hexaethyl-di-lead in tetraethyl-lead is investigated here. Since hexaethyl-di-lead is easily hydrolyzed, ethyl alcohol was used as solvent and tetraethylammonium iodide as indifferent electrolyte. Figure 2 shows the direct proportionality between the diffusion current and the hexaethyl-di-lead concentration in the solution. If the content is 0.5 to 10%, this relation may be used for the determination of the hexaethyl-di-lead content. The average error is 7%.

There are 2 graphs, 1 table and 3 Soviet references.

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sov/63-4-1-27/31

Polarographic Determination of Hexaethyl-di-Lead in Tetraethyl-Lead

ASSOCIATION: Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete (Scientific Research Institute of Chemistry at the Gor'kiy State University)

SUBMITTED: June 3, 1958

Card 2/2

VERTYULINA, L. N.; DOMRACHEV, G. A.; KORSHUNOV, I. A.; RAZUVAYEV, G. A.

Preparation and polarographic behavior of derivatives of
bis-ethylbenzenochromium. Zhur. ob. khim. 33 no.1:285-290
'63. (MIRA 16:1)

1. Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom
gosudarstvennom universitete imeni N. I. Lobachevskogo.

(Chromium compounds) (Polarography)

33925
S/079/62/032/001/001/016
D205/D302

5.1310

AUTHORS: Korshunov, I.A., Vertyulina, L.N., and Domrachev, G.A.

TITLE: Reduction of the sandwich type aromatic chromium compounds on a dropping mercury cathode

PERIODICAL: Zhurnal obshchey khimii, v. 32, no. 1, 1962, 9 - 12

TEXT: This is a continuation of a previous communication by Korshunov, et al (Ref. 1: Dokl. AN SSSR, 122, 1029, 1958). Results are given of the reduction of iodides of di(*o*-xylene)-chromium (I), di(*m*-xylene)-chromium(I), di(*p*-xylene)-chromium(I), benzene diphenyl chromium(I) and dihexamethylbenzene-chromium(I) hydroxide, on a dropping mercury cathode. Synthesis of the xylene derivatives were performed according to E. Fischer and W. Hafner (Ref. 2: Z. anorg. allg. ch., 286, 146, 1956) and of the hexamethylbenzene derivatives according to E. Fisher and D. Sens (Ref. 3: Ber., 89, 1809, 1956). The polarograms were recorded using a visual polarograph of all the iodides. The polarogram of the dihexamethylbenzene-chromium(I) hydroxide was recorded by an electronic integrating differentiating polarograph. Polarograms were taken in 0.5 N solutions of LiCl, KCl

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S/079/62/032/001/001/016
D205/D302

Reduction of the sandwich type ...

NH_4Cl , Na_2SO_4 , K_2O_3 , KOH and also in buffer solutions in the pH range, 3.1 - 11.75. In the polarograms of solutions of the chromoaromatic compounds one diffusion induced wave is observed. The diffusion current is proportional to the concentration of the chromoaromatic compounds. The half-wave potentials are independent of the electrolyte character, the pH and the position of the methyl group in the xylene derivatives. Their value depends on the substituents in the aromatic ring as was the case in other chromoaromatic compounds of the sandwich structure. The number of electrons taking part in the electrode reaction, as determined from the HeyrovskyIlkovich equation equals one. The process is reversible. The authors conclude that the chromoaromatic compounds are reduced on the dropping mercury cathode in an adsorbed state, accepting one electron and passing into the neutral state. There are 3 figures, 1 table and 4 references: 1 Soviet-bloc and 3 non-Soviet-bloc. The reference to the English-language publication reads as follows: W. Herwig, W. Metlesies and H. Zeiss, J. Am. Chem. Soc., 81, 6203, 1959.

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Card 2/3

33925
S/079/62/032/001/001/016
D205/D302

Reduction of the sandwich type ...

ASSOCIATION: Gor'kovskiy gosudarstvennyy universitet im. N.I. Lo-
bachevskogo (Gor'kiy State University im. N.L. Loba-
chevskiy)

SUBMITTED: January 9, 1961

X

Card 3/3

KORSHUNOV, I.A.; VERTYULINA, L.N.; DOMRACHEV, G.A.

Reduction of chromium aromatic compounds of a sandwichlike structure
on dropping mercury cathode. Zhur. ob. khim. 32 no.1:9-12 Ja '62.
(MIRA 15:2)

1. Gor'kovskiy gosudarstvennyy universitet imeni N.I.Lobachevskogo.
(Chromium organic compounds) (Reduction, Electrolytic)

VERTYULINA, L.N.; KORSHUNOV, I.A.

Polarographic determination of hexamethyldilane in tetraethyllead.
Khim.nauka i prom. 4 no.1:136 '59. (MIRA 12:5)

I. Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom
gospodarstvennom universitete.
(Lead organic compounds) (Polarography)

KORSHUNOV, I.A.; VERTYULINA, L.N.; RAZUVAYEV, G.A.; SORKIN, Yu.A.;
DOMRACHEV, G.A.

Polarographic reduction of some chromium aromatic compounds of
sandwich structure. Dokl.AN SSSR 122 no.6:1029-1031 O '58.
(MIRA 11:12)

1. Nauchno-issledovatel'skiy institut khimii Gor'kovskogo
gosudarstvennogo universiteta imeni N.I. Lobachevskogo, 2. Chlen-
korrespondent AN SSSR (for Razuvayev).
(Chromium organic compounds) (Reduction, Chemical)
(Polarography)

5(1, 2)
AUTHORS:

Korshunov, I. A., Vertyulina, L. N., Sov/20-122-6-20/49
Razuvayev, G. A., Corresponding Member, AS USSR,
Sorokin, Yu. A., Domrachev, G. A.

TITLE:

Polarographic Reduction of Some Chromium Aromatic Compounds
of Sandwich Structure (Polyarograficheskoye vosstanovleniye
nekotorykh khromaromaticeskikh soyedineniy sendvichevogo
stroyeniya)

PERIODICAL:

Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 6,
pp 1029-1031 (USSR)

ABSTRACT:

While the polarographic behavior of the bis-cyclopentadienyl
compounds was described sufficiently in detail (Ref 1), there
is one paper only (Ref 2) on the reduction of the cation
 $((C_6 H_6)_2 Cr)^+$. As in the laboratory of the authors
dibenzene-(I)-, ditoluene-(II), dimesitylene-(III)-and
bis-diphenyl chromium-(IV) iodide were prepared, furthermore
the dicumene-(V)-and di-(cyclohexyl benzene)-chromium iodides-
(VI) not described in publications, it was interesting to
study the polarographic reduction of this series of compounds.
The synthesis (according to Ref 3) of the above-mentioned

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Polarographic Reduction of Some Chromium Aromatic
Compounds of Sandwich Structure

SOV/20-122-6-20/49

derivatives ((I)-(VI)) is described together with the yields computed and ascertained. From the concentrated solution of dicumene chromium the compound (V) was precipitated as a cherry-red viscous oil by adding saturated aqueous KJ-solution. The authors did not succeed in crystallizing it. (V) is well soluble in low alcohols, acetone, methylene chloride, dichloro ethane, pyridine, dimethyl formamide, whereas it is practically insoluble in ether, CCl_4 , water and benzene.

(VI) is synthesized by a similar method. (VI) was isolated as a dark-red powder from the reaction mixture (with an addition of 50 ml purified n-nonane) by heating for 1.5 hours at 150°. Its solubility in the solvents mentioned in connection with (V) is the same as that of (V). The polarographic investigations of the iodides ((I)-(VI)) were carried out by means of the visual polarograph, which is manufactured by the institute mentioned in the Association. The reduction was carried out on the background of several C.5 N aqueous electrolytes of lithium chloride, sodium hydroxide, potassium nitrate, sodium sulfate, hydrochloric acid and buffer

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Polarographic Reduction of Some Chromium Aromatic Compounds of Sandwich Structure

SOV/20-122-6-20/49

solutions with pH from 2.3 to 11.75 (Fig 2). The chromium aromatic compounds produce diffusion currents in almost all above-mentioned electrolytes. An exception are hydrochloric acid and the buffer solutions with a pH-value below 2, in which they are precipitated or (e. g. (II)) do not develop any reduction waves. All iodides are reduced within one wave (Fig 1). From the study of the results obtained it can be concluded that the introduction of the alkyl-(V) or cyclohexyl-(VI) substituent into the aromatic nucleus does not exercise considerable influence upon the quantity of the semwave-potential. In the transition from (II) to (III) the semwave is shifted only slightly into the direction of the negative values as compared with (I). In the introduction of an aromatic substituent (IV), however, a marked shift of the potential into the range of positive values takes place. For the time being, it is still difficult to reconcile the polarographic results with the data obtained by other methods. The polarographic method, however, can play a certain role in the investigation of the nature of the class of

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Polarographic Reduction of Some Chromium Aromatic Compounds of Sandwich Structure SOV/20-122-6-20/49

compounds in question. There are 3 figures and 4 references, 1 of which is Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy institut khimii Gor'kovskogo gosudarstvennogo universiteta im. N. I. Lobachevskogo (Scientific Research Institute of Chemistry of the Gor'kiy State University imeni N. I. Lobachevskiy)

SUBMITTED: June 17, 1958

Card 4/4

VERTYULINA, L. N.

79-2-3/54

AUTHORS: Vertylina, L. N., Malyugina, N. I.

TITLE: Reduction of Nitrophenols on a Multidrop Mercury Cathode (Vosstanovleniye nitrofenolov na mnogokapel'nom rtutnom katode)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 2, pp. 304 - 308 (USSR)

ABSTRACT: The reduction on a mercury droplet electrode was by many authors investigated for the purpose of the determination of quantity and of the reduction mechanism (reference 1 - 9). The authors used the apparatus with a multidrop mercury cathode described by Neyman et al. (reference 13), where some modifications necessary for the investigation were made. For comparing the results of the electrolytic reduction of nitrophenols in water- and aqueous alcohol solutions the conditions of the electrolysis were left unchanged. The electrolysis was performed at a higher potential than that of the saturation current, in the case of p-nitrophenol with 2,2 V and in m- and o-nitrophenol with 1,8 V. The percentage of the reduction products represents the mean value from several experiments. The accuracy in the determination of the reduction products amounted to 5 - 6 % (relatively). Conclusions: 1) As a result of the study of the reduction of o-, m- and p-nitrophenols on a multidrop mercury cathode it was determined that in water- and aqueous alcohol

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79-2-3/54

Reduction of Nitrophenols on a Multidrop Mercury Cathode

solutions with pH from 2 to 2.5 the nitrophenols are mainly reduced to o- and p-aminophenols. p- and o-quinone in small amounts form as intermediate products. In the case of m-nitrophenol the hydroxylamine derivative of m-nitrophenol and the m-aminophenol occur as reduction products. They almost form in equal amounts.

2) The yield of the reduction products on the multidrop mercury cathode is in the case of p- and m-nitrophenols in aqueous alcohol solutions smaller than in water solutions. The small yield, observed in these tests, of reduction products of p- and m-nitrophenols in aqueous alcohol solutions may probably be explained by the formation of an intermolecular hydrogen bond. This develops in the aqueous alcohol solutions with the aid of alcohol molecules, is more stable than in water solutions and obstructs the reduction (reference 20). o-nitrophenol forms an innermolecular hydrogen bond, which, as is already known (references 1 and 20) influences the reduction of the nitrogroup as well in water - as in aqueous alcohol solutions. The authors thank I. A. Korshunov for valuable advices in the performance of the work. There are 1 table, and 20 references, 11 of which are Slavic.

Card 2/3

Reduction of Nitrophenols on a Multidrop Mercury Cathode

79-2-3/64

ASSOCIATION: State University, Gor'kiy
(Gor'kovskiy gosudarstvennyy universitet)

SUBMITTED: February 26, 1957

AVAILABLE: Library of Congress

Card 3/3

KORSHUNOV, I.A.; VERTYULINA, L.N.

Reduction of certain sulfonamide compounds at the dropping mercury electrode. Zhur. ob. khim. 31 no.4:1056-1062 Ap '61.
(MIRA 14:4)

1. Nauchno-issledovatel'skiy institut khimii pri Gro'kovskom
gosudarstvennom universitet imeni N. I. Lobachevskogo.
(Sulfamides)
(Reduction, Electrolytic)

VERTYULINA, L.N.; MALYGINA, N.I.

Reduction of nitrophenols on the multiple drop mercury cathode.
Zhur. ob. khim. 28 no.2:304-308 F '58. (MIRA 11:4)

l.Gor'kovskiy gosudarstvennyy universitet.
(Reduction, Chemical) (Phenol)
(Electrodes, Dropping mercury)

VERTYULINA, L. N.

VERTYULINA, L. N. — "A Study of the Mechanism of Reducing Ortho-,
Meta-, and Para-Nitrophenols, and Meta-Nitro Benzolsulfonic Acid on a Mer-
cury Cathode." Sci Res Inst of Chemistry, Gor'kiy State U. Gor'kiy, 1955.
(Dissertation for the Degree of Candidate in Chemical Sciences)

SOURCE Knizhnaya Letopis', No 6 1956

U.S.S.R.

Reduction of m-nitrobenzenesulfonic acid on a dropping mercury cathode. L. A. Firsanova, T. N. Vertiyakina, and M. I. Malysheva. Zhur. Russ. Khim. Sojed., 22(1), 1957, 120-124. (2) *[Handwritten note: 1/2]*

Khim. 25, 261-3 (1955).—Polarographic reduction of $\text{m-NaC}_6\text{H}_4\text{SO}_3\text{H}$ (I) was studied from 0.1×10^{-3} to 1.18×10^{-2} M concn. in buffers with pH from 2.03 to 13.0, at 21°. The potentials were detd. with a satd. calomel electrode as the anode, the potential of this being assumed to be zero for reference. In solns. from acidic to those with pH 8, only 1 diffusion wave was observed, while from pH 8 to 12, 2 waves appeared. In the latter case, from pH 8 to 9, the 2nd wave had $1/4$ the height of the total wave, while at pH 9.7-12.0 it was 0.5 of the total wave. Diffusion current was linear in respect to concn. in all cases. In neutral or weakly acidic solns., the diffusion current passed through a min. at pH 4.0; at higher pH values (weakly basic soln.), diffusion current of the 1st wave had a max. at pH 9 while the diffusion current of the 2nd wave passed through a max. at this pH; the max. of the diffusion current of the 1st wave had a max. at pH 10. These results indicated adsorption phenomena. The half-wave potential up to pH 8.5-9 rose linearly with pH: $E_{1/2} = -0.05 - 0.038 \text{ pH}$; in more basic solns., the half-wave potential of the first wave was relatively const. at about 0.03 v., while the 2nd wave followed the relation $E_{1/2} = -1.88 + 0.1 \text{ pH}$. The 2 values thus merged at about pH 12. The no. of electrons involved calc'd. from the Heyrovsky-Ikavic equation was 1 for the 1st wave and 0.4 for the 2nd, indicating possible irreversibility of the electrode reaction. If the reduction actually required 6 electrons, as indicated by many potentiographic studies, the calcd. of a diffusion coeff. at pH 2 gave

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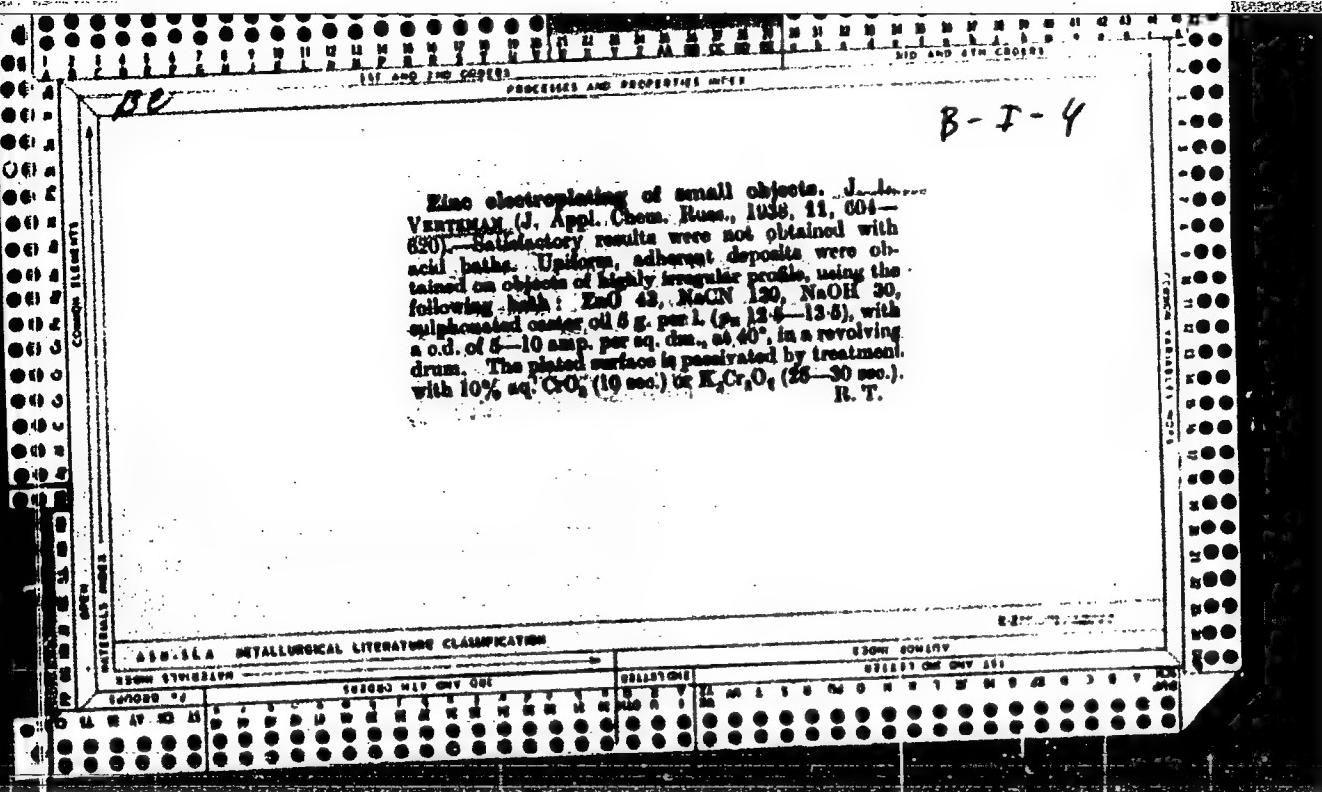
O. A. Krestchakov

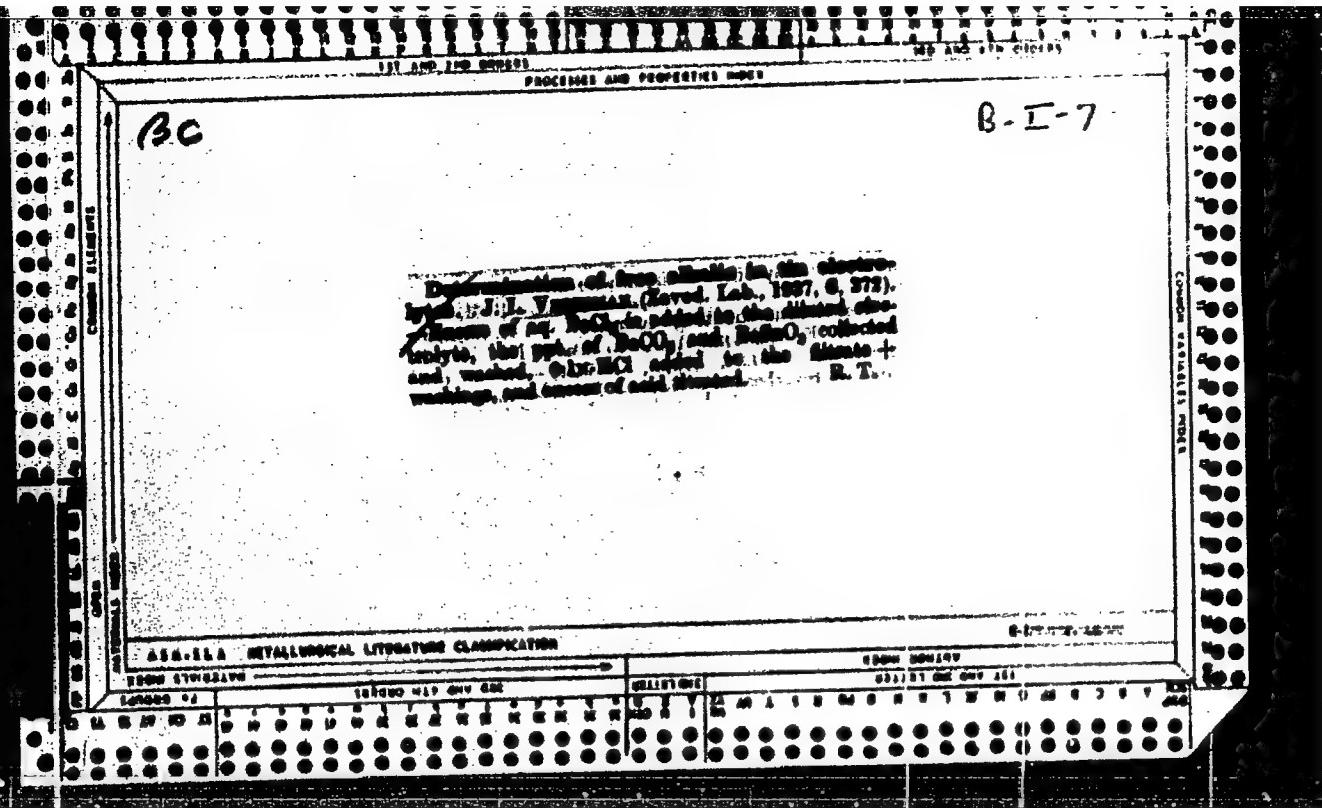
the value of 0.4×10^{-4} sq. cm./sec., which agreed with the values for similar org. nols. Electrocapillary curves of Hg at pH 4.1 in the presence of I were shown; the influence of I was apparent in the ascending branch of the curve at not too great neg. potentials of the electrode. For extn. of I, the use of KOH was recommended; with 5% KOH the diffusion wave occurred at a potential near -0.8 to 0.9 v. The resulting amino acid did not interfere. Accuracy of some 5% was possible. Also in J. Gen. Chem. (U.S.S.R.) 25, 218-8 (1955) (Engl. translation). O. M. Kosolapoff

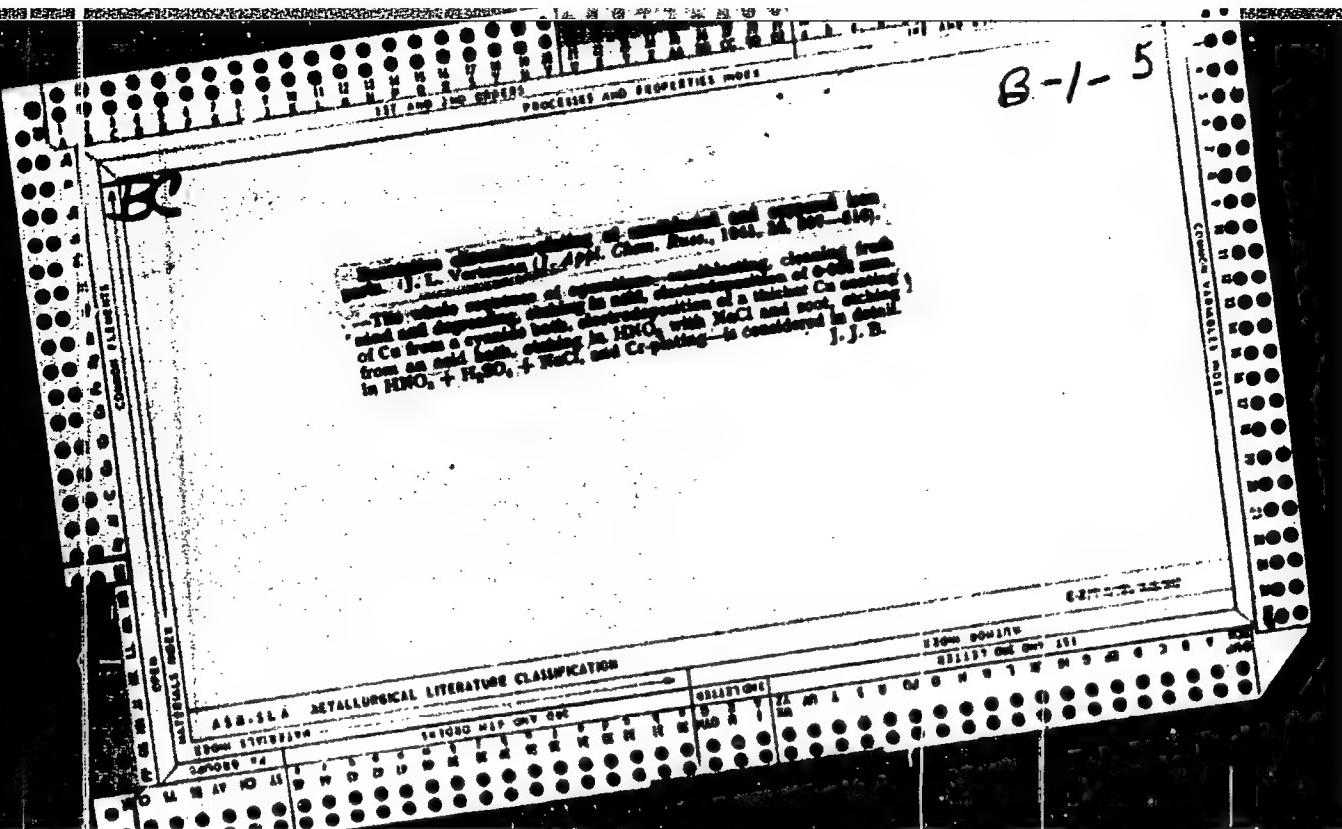
B-I-4

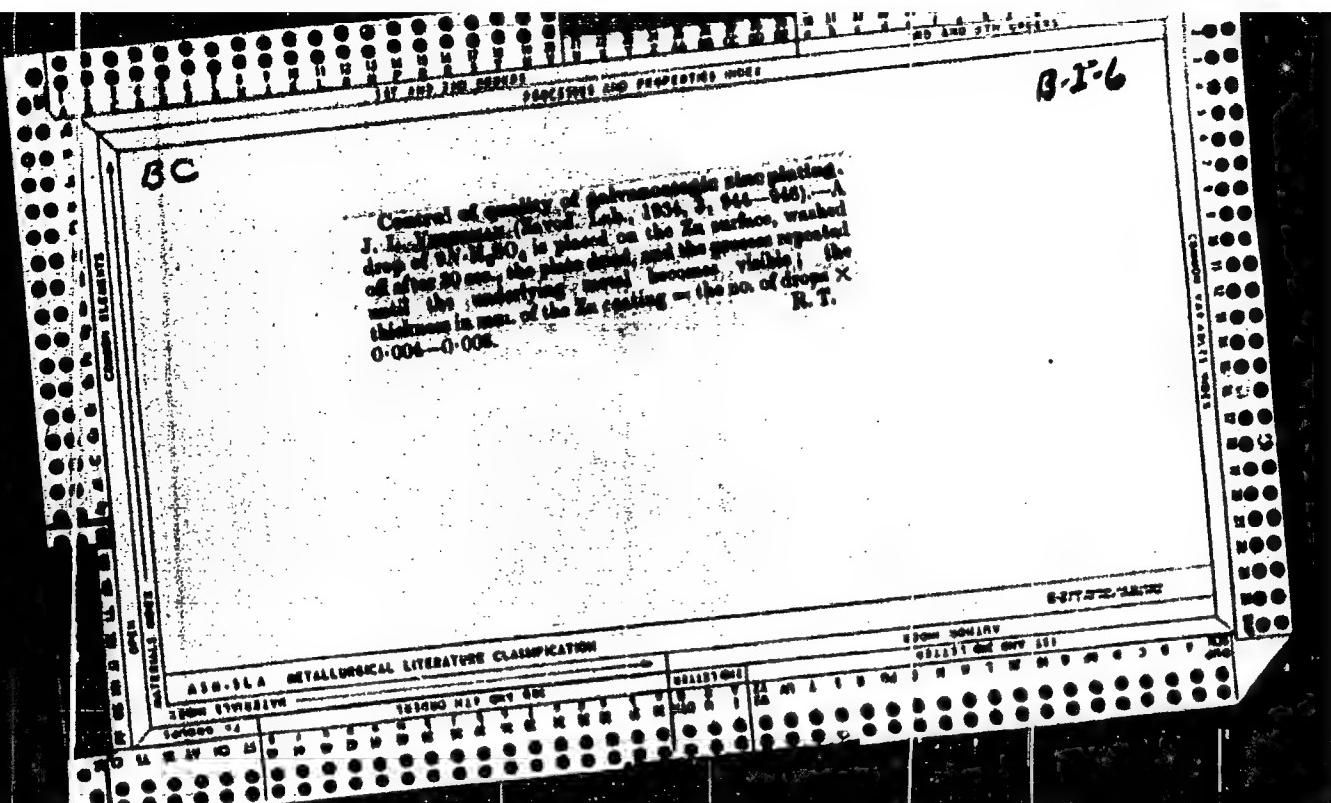
Zinc electroplating of small objects. J. A. VERTMAN, J. Appl. Chem., Russ., 1938, 11, 604-620. Satisfactory results were not obtained with acetic bath. Uniform, adherent deposits were obtained on objects of highly irregular profile, using the following bath: ZnO 42, NaCN 120, NaOH 30, sulphonated castor oil 5 g. per l. (12.6-13.5), with a o.d. of 5-10 amp. per sq. dm., at 40°, in a revolving drum. The plated surface is passivated by treatment with 10% eq. Cr_2O_3 (10 sec.) or $\text{K}_2\text{Cr}_2\text{O}_7$ (25-30 sec.). R. T.

R. T.

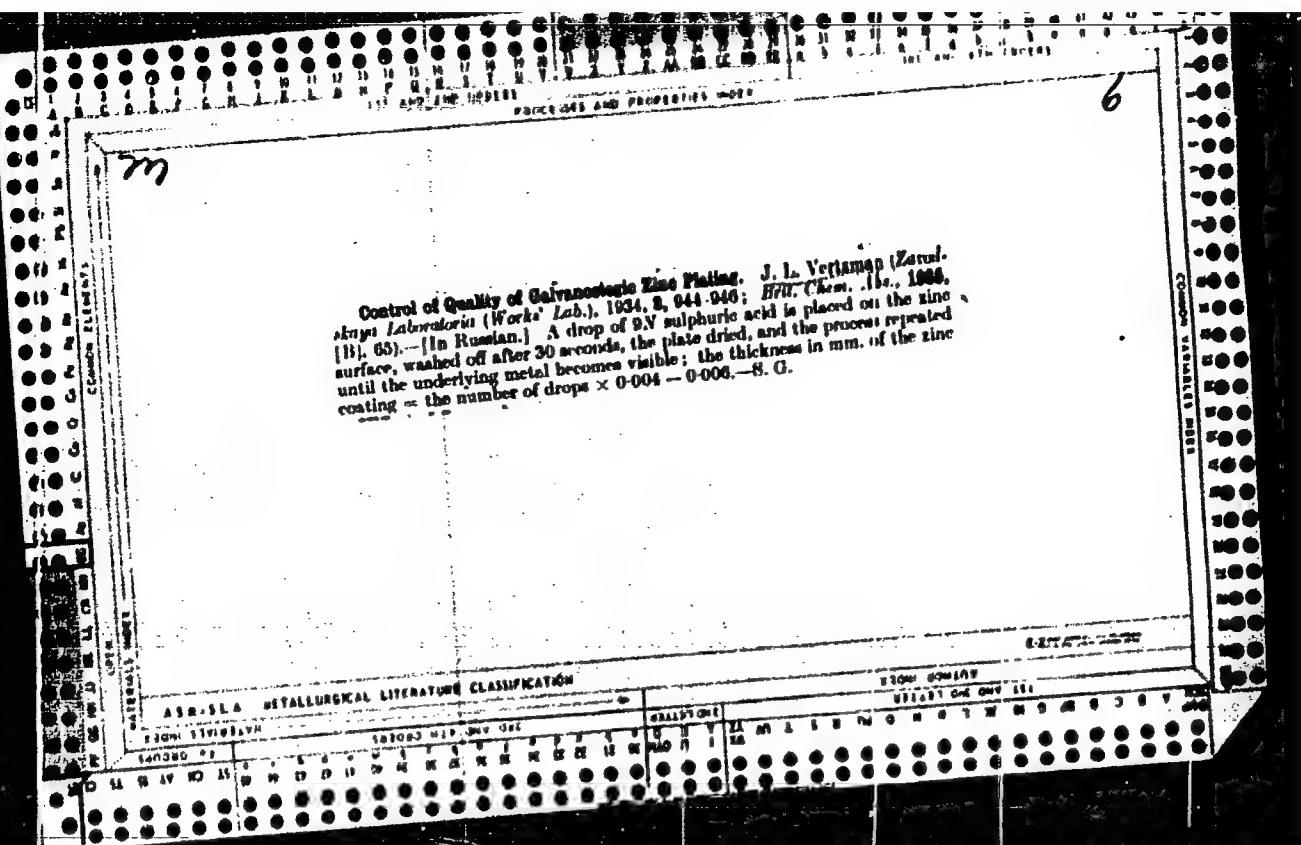


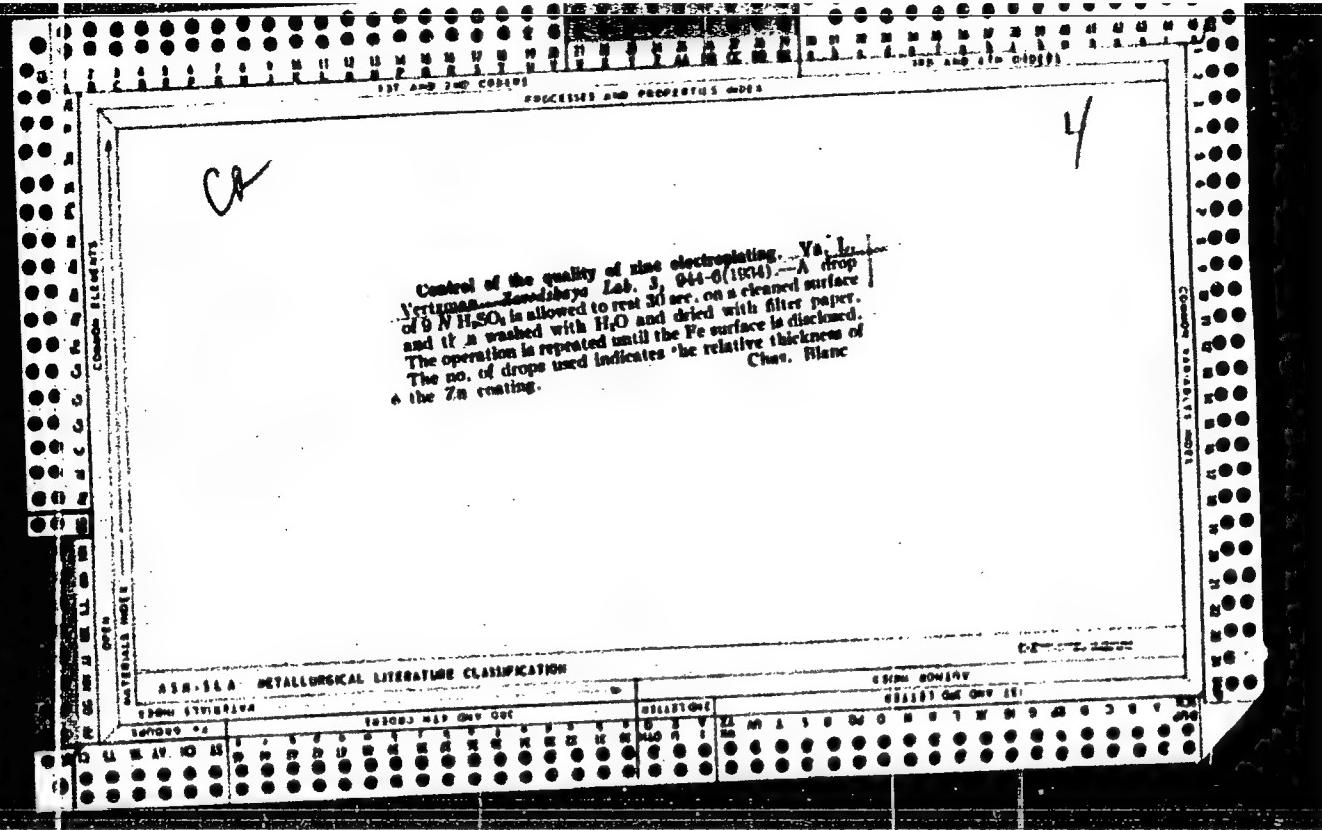






Control of Quality of Galvanostatic Zinc Plating. J. L. Vartanian (Zerkalskiy Laboratoriya Works' Lab.), 1934, 2, 944-946; *Bull. Chem. Soc.*, 1935, [13], 65).—[In Russian.] A drop of 9N sulphuric acid is placed on the zinc surface, washed off after 30 seconds, the plate dried, and in the process repeated until the underlying metal becomes visible; the thickness in mm. of the zinc coating = the number of drops \times 0.004 — 0.006.—S. G.





SIGOV, I.V.; VERUGA, V.F.

Standardization of reducing gears and electric-motor reducers.
Standartizatsiia 27 no.2:12-14 P '63. (MIRA 16:4)
(Gearing)

SIGOV, I.V., kand.tekhn.nauk; YERUGA, V.F., inzh.

Planetary reducing gears manufactured abroad. Vest.mashinostr. 43 no.4:
81-86 Ap '63.

(MIRA 16:4)

(Gearing)

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859610004-7

SIGOV, I.V., kand.tekhn.nauk; VERUGA, V.F., inzh.; VOLOVA, T.A., inzh.

Motor-reducers based on high-speed electric motors. Vest.
mashinostr. 42 no.8:49 Ag '62. (MIRA 15:8)
(Electric driving)

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859610004-7"

L 044.70-67 EWP(e)/EWT(m) WH

ACC NR: AT6016928

SOURCE CODE: UR/0072/66/000/005/0019/0021

AUTHOR: Kutateladze, K. S. (Doctor of technical sciences); Verulashvili, R. D.
(Candidate of technical sciences)ORG: Tbilisi Scientific Research Institute of Structural Materials (Tbilisskiy nauchno-issledovatel'skiy institut stroymaterialov)

TITLE: Glass composition based on perlite for production of high-voltage insulators

SOURCE: Steklo i keramika, no. 5, 1966, 19-21

TOPIC TAGS: electric insulator, insulating material, glass, dielectric material

ABSTRACT: The authors study the insulating properties of perlite-based glasses with the following compositions (in %): 55-59 SiO₂, 0.1-0.5 TiO₂, 8-10 Al₂O₃, 0.5-2 Fe₂O₃, 6-7 MnO, 9-10 CaO, 5-6 MgO, 2.5-4 K₂O and 2.3-8 Na₂O. All compositions were founded in two-liter fireclay vessels at 1440-1480° for two hours. A table is given comparing the dielectric indices and a number of other physical and chemical characteristics of these glasses with the properties of 13v glass and glass made by the L'vov Plant No. 1. The perlite glasses show dielectric characteristics as good as those of low-alkali 13v glass and are even superior with respect to some indices (low sensitivity of tanδ to changes in temperature). The effect of R₂O additives on the dielectric properties of perlite glass is studied. It is found that the addition of 6-7% Na₂O causes a

UDC: 666.18.6

Card 1/2

L 04470-67

ACC NR: AT6016928

considerable reduction in the volumetric resistivity of the glass. The resistivity then begins to increase with sodium oxide concentration reaching a maximum at 10-11% which may be due to the neutralization effect of potassium oxide in the glass composition. This effect begins to disappear at a sodium oxide concentration of 15-17%. One of the most important properties of the perlite glasses is their resistance to change in the tangent of the dielectric loss angle with changes in temperature from 20 to 70-80° in spite of the high concentration of alkali oxides (up to 20%). Another important advantage of the new glasses is that the concentration of Na₂O and K₂O is not critical with respect to high-voltage insulating properties of the glasses.

Orig. art. has: 3 figures, 2 tables.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 002/ OTH REF: 000

Card 2/2 eqpt

ACC NR: AP7005417

SOURCE CODE: UR/0072/66/000/011/0024/0027

AUTHORS: Kutateladze, K. S. (Doctor of technical sciences); Veruleashvili, R. D. (Candidate of technical sciences)

ORG: Tbilisi Scientific Research Institute for Building Materials (Tbilisskiy nauchno-issledovatel'skiy institut stroymaterialov)

TITLE: Electric insulating pyroceramics derived from rocks

SOURCE: Steklo i keramika, no. 11, 1966, 24-27

TOPIC TAGS: electric insulator, ceramic material, ceramic dielectric

ABSTRACT: The rocks perlite, serpentinite, and dolomite were investigated for their suitability as raw materials in the production of pyroceramics. The investigation supplements the results of S. I. Sil'vestrovich et al. (Zhurnal VKhO imeni D. I. Mendeleyeva, 1960, t. 5, No. 2). The physical and chemical properties of two series of mixtures consisting of various amounts of perlite and serpentinite, and perlite, dolomite, and quartz sand, respectively, were studied. The mixtures were subjected to chemical analysis, x-ray spectroscopy, electron microscopy, and thermogravimetric analysis. In addition, the electrical properties of the specimens were determined. The experimental results are summarized in graphs and tables. It was found that mixtures consisting of perlite, dolomite, and quartz sand yielded the most satisfactory high-voltage electric insulators. Orig. art. has: 3 tables and 2 graphs.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: UD:01 Card 1/1 666.117.3:546

~~VERJLASHVILI, Sh. A. Cand Tech Sci -- (diss) "Study of the basic problems of summertime soil the technology of mechanized inter-row cultivation in tea plantations (in Georgia,"~~
~~"Institute of Tea," Tbilisi, 1957. 23 pp (Min of Agr USSR. Georgian Order of Labor Red Banner Agr Inst), (KL, 3-58, 97)~~

VERULASHVILI, Sh.A., aspirant

Investigating fundamental problems of the technology of summer
mechanized intertillage in tea plantations. Biul. VNIICHSK
no.1:51-75 '57. (MIRA 15:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut chaya i
subtropicheskikh kul'tur.
(Georgia--Tea machinery)

KOGOY, T.F. (Moskva); IVANOVSKAYA, T.Ye. (Moskva); KHOKHLOVA, Z.Ye.,
(Moskva); VERULASHVILI, V.I. (Moskva)

Pathological anatomy in experimental toxoplasmosis of pregnant
animals. Arkh. pat. 27 no.6:61-67 '65. (MIRA 19:1)

1. Kafedra patologicheskoy anatomii (zav. - deystvitel'nyy chlen
AMN SSSR prof. I.V. Davydovskiy) II Moskovskogo meditsinskogo
instituta imeni N.I. Pirogova i rodil'nyy dom No. 1 (glavnyy vrach
V.I. Verulashvili), Kutaisi. Submitted January 8, 1964.

VERULASHVILI, V.I.

Effect of acute and chronic toxoplasmosis on the course of pregnancy under experimental and clinical conditions. Soob.
AN Gruz. SSR 30 no.1:67-74 Ja '63. (MIRA 17:1)

1. Institut normal'noy i patologicheskoy fiziologii AMN SSSR.
Predstavleno chlenom-korrespondentom Akademii A.N. Bakuradze.

VERULASHVILI, V.I., kand. med. nauk

Toxoplasmosis in obstetrics. Akush. i gin. 39 no.3t40-44
My-Je'63 (MIRA 17:2)

1. Iz kafedry akusherstva i ginekologii (zav. - chlen-korrespondent AMN SSSR prof. L.S. Persianinov) lechebnogo fakul'teta II Moskovskogo meditsinskogo instituta imeni N.I.Pirogova, laboratorii vozrastnoy fiziologii i patologii (zav. - prof. I.A. Arshavskiy) Instituta normal'noy i patologicheskoy fiziologii (direktor - deystvitel'nyy chlen AMN SSSR prof. V.V. Parin) AMN SSSR i rodil'nogo doma No.1 Kutaisi (glavnyy vrach - kand. med. nauk V.I.Verulashvili).

VERULASHVILI, V.I. (Moskva)

Determination of C-reactive protein in toxoplasmosis under experimental and clinical conditions. Pat. fiziol. i eksp. terap. 7 no.1:75-76 Ja-F'63. (MIRA 16:10)

1. Iz laboratorii vozrastnoy fiziologii i patologii (zav. - prof. I.A. Arshavskiy) Instituta normal'noy i patologicheskoy fiziologii (dir. - deystvitel'nyy chlen AMN SSSR prof. V.V. Parin) AMN SSSR i kafedry akusherstva i ginekologii (zav. - chlen - korrespondent AMN SSSR, zasluzhennyy deyatel' nauki BSSR, prof. L.S. Persianinov) lechebnogo fakul'teta II Moskovskogo meditsinskogo instituta imeni N.I.Pirogova.
(BLOOD PROTEINS) (TOXOPLASMOSIS)
(PREGNANCY, COMPLICATIONS OF)

VERULASHVILLI, V. I., Candidate Med Sci (diss) -- "Material on the dynamics of oxidation-reduction processes in various gynaecological hemorrhages in connection with treatment". Tbilisi, 1959. 20 pp (Tbilisi State Med Inst), 200 copies (KL, No 22, 1959, 121)

VERULASHVILI, V.I.

Experimental analysis of the state of permeability of the
placental barrier in toxoplasmosis during normal and patho-
logical pregnancy. Biul. eksp. biol. i med. 56 no.12:44-48
D '62. (MIRA 17:11)

1. Laboratoriya vozrastnoy fiziologii i patologii (zav. - prof.
I.A. Arshavskiy) Instituta normal'noy i patologicheskoy fizio-
logii (dir. - deystvitel'nyy chlen AMN SSSR V.V. Parin) AMN SSSR,
Moskva.

VE RUNAC, V.

Creation in the field of technology. p.117.
(Sbirka Vynalezu, Vol. 6, No. 6, June 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 9, Sept. 1957. Uncl.

VERUSHKIN, S. M.

On the hybridization of Triticum by Agropyrum, Saratov, 1935. 37 p. Text in Russian.

1. Plant - breeding. 2. Hybridization, Vegetable.

ZACHOVAL, J.; KALAL, J.; VERUOVIC, B.

On the nature of complex catalysts from cobalt (III)-chloride,
pyridine and diethylaluminum chloride for the stereospecific
butadiene polymerization. Coll Cz Chem 28 no. 12:3450-3451
D '63.

1. Technische Hochschule fur Chemie, Prag.

VERUOVIC, Budimir

Preparation of cation exchange resins selective to iron. Chem prum
14 no.4:189-191 Ap '64.

1. Higher School of Chemical Technology, Prague.

S/081/62/000/023/109/120
B101/B186

AUTHOR: Veruovic, Budimir

TITLE: Method of producing a complex-forming cationite for the selective substitution of alkali metals

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1962, 745, abstract 23P493 (Czechosl. pat. 96919, October 15, 1960)

TEXT: This patent concerns a method of producing cationites for the selective substitution of alkali metals; 3,5-diaminophenol tetraacetic acid is condensed with formaldehyde in basic medium until a resinous complex is formed. 2 g phloroglucinol and 6 g sodium amino diacetate are heated by a reflux condenser in aqueous-alcoholic solution for 4-12 hrs. The dark-blue solution is acidified with hydrochloric acid and the precipitated acid is recrystallized from water. 2 g of this acid is alkalinized with 3 N NaOH solution, 25 ml 40% formalin is added, and heating at 75°C is performed for 12 hrs with constant stirring. The resulting resin is polymerized under IR irradiation. The substituting capacity is 3.5 milliequivalents Ca per g dry resin. [Abstracter's note: Complete ✓

Card 1/2

S/081/62/000/023/109/120

Method of producing a complex-forming... B101/B186
translation.]

Card 2/2

L 45415-66 EWP(j)/T RM

ACC NR. AP6028305 (A) SOURCE CODE: CZ/0009/66/000/006/0344/0347

37B

AUTHOR: Veruovic, Budimir; Zachoval, JaromirORG: College of Chemical Technology, Prague (Vysoka skola chemickotechnologicka)TITLE: Stereospecific polymerization of butadiene by the catalytic system from diethyl aluminum chloride and rhodium triacetyl acetonateSOURCE: Chemicky prumysl, no. 6, 1966, 344-347 and appropriate inserts preceding p. 319TOPIC TAGS: butadiene, polymerization, aluminum, rhodium, stereospecific polymerizationABSTRACT: Butadiene polymerization has been studied using diethyl aluminum chloride and rhodium triacetyl acetonate as the catalytic system in a water-free medium. The resulting polybutadiene has an above-98% 1,4-trans structure. Polymerization takes place with a ratio of A1:Rh > 3. The optimum ratio A1:Rh is 15. Conversion depends on the concentration of the catalytic components and on temperature. No inhibition period has been observed. The limiting vis-

Card 1/2

UDC: 678.771.24

L 45415-66

ACC NR: AP8028305

O

cosity number increases with the concentration of rhodium triacetyl acetonate and decreases with a rise in temperature. Orig. art. has: 11 figures. [Based on authors' abstract.] [KS]

SUB CODE: 11/ SUBM DATE: 21Jan66/ ORIG REF: 001/ SOV REF: 001/
OTH REF: 012/

hs

Card: 2/2

VERVEYKINA, A.K., inzh.; KOLCHINSKIY, Yu.L., inzh.; NIKOLAYEVSKIY,
Ye.Ya., inzh.; RODIONOVA, R.G., inzh.; RYAPOLOV, A.F., inzh.;
SOKOL, I.A., inzh.; STERLIN, S.L., inzh.; EYDEL'NANT, L.B.,
inzh.; ORLOV, V.M., kand. tekhn. nauk retsenzent; YURGEL', B.I.,
inzh., retsenzent; FOKIN, V.Ya., inzh., nauchn. red.; VOLNYANSKIY, A.K.
red.; MARKOV, I.I., red.; MEL'NIK, V.I., red.; UNKIN, A.K.,
red.; STAROVEROV, I.G., red.; TUSHNYAKOV, M.D., red.; CHERNOV,
A.V., red.; SUDAKOV, G.G., red.; IOSELOVSKIY, I.V., red.

[Technological pipings in industrial enterprises] Tekhnologicheskie
truboprovody promyshlennyykh predpriiatii. Moskva,
Stroiizdat, Pt.1, 1964. 784 p. (MIRA 18:9)

VERVEVKINA, A.K., inzh.; KOLCHINSKIY, Yu.L., inzh.; NIKOLAYEVSKIY,
Ye.Ye., inzh.; RODICHNOVA, R.G., inzh.; RYAPOLOV, A.F.,
inzh.; SOKOL, I.A., inzh.; STERLIK, S.L., inzh.;
EYDEL'NANT, L.B., inzh.; ORLOV, V.M., kand. tekhn. nauk,
retsenzent; YURGEL', B.I., inzh., retsenzent; FOKIN, V.Ya.,
inzh., nauchn. red.; VOLNYANSKIY, A.K., glav. red.; SUDAKOV,
G.G., zam. glav. red.; IOSELOVSKIY, I.V., red.; MARKOV, I.I.,
red.; MEL'NIK, V.I., red.; ONKIN, A.K., red.; STAROVEROV,
I.G., red.; TUSHNAYAKOV, M.D., red.; CHERNOV, A.V., red.

[Engineering pipelines for industrial enterprises] Tekhnicheskie
truboprovody promyshlennyykh predpriatii. Moskovskva, Stroizdat, 1964. 2 v. (MIRA 17:12)

VERUOVIC, Budimir; KALAL, Jaroslav; ZACHOVAL, Jaromir

Butadiene polymerization through the action of diethylaluminum
chloride and cobalt acetylacetonate. Chem prum 15 no.1:22-25
Ja '65.

1. Chair of Macromolecular Chemistry of the Higher School
of Chemical Technology, Prague.

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859610004-7

VERVEYKO, N.D. (Voronezh); ZNAMENSKIY, V.A. (Voronezh)

Flow of an elastoplastic medium in a curved circular pipe in case of a
constant pressure drop. Izv. AN SSSR. Mekh. no.5:169-171 S-0 '65.
(MIRA 18:10)

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859610004-7"

~~VERVOORST, P.~~
~~Friederich, W. and Vervoort, P.~~

A New Class of Initiating Explosives--The Ammonium and Hydrazine Compounds of Bivalent Heavy Metal Chlorates and Perchlorates.

Z. ges. Schiess-Sprengstoffw., V. 21, 1926, pp. 49-52, 65-9, 84-7, 123-25, 143-46, 103-5.

Chem. Abst., Vol. 21, P. 1184, 1927.

The metal amines of chlorates and perchlorates of Cu, Cd, Ni, Co and Zn were prepd. by passing NH₃ over the metallic chlorate or perchlorate soln. with cooling and agitation, filtering and drying the pptd. salt. These compds. have explosive properties between those of primary explosives such as Hg(ONC)₂ and secondary explosives such as tetryl. The tetram nocopper chlorate, Cu(ClO₃)₂·4NH₃ was, however, the only one of the 10 amino-chlorates capable of initiating the detonation of TNT or tetryl. They are deliquescent and hydrolyze rapidly, even in moist air, losing NH₃. Ni(ClO₄)₂·6NH₃ has a rate of detonation of 5300 m. per. sec. The chlorate compds. are more sensitive than the corresponding perchlorate compds. Corresponding hydrazinates were prepd. by adding a soln. of hydrazine hydrate in H₂O or EtOH to a soln. of the metallic chlorate or perchlorate, with cooling and agitation, washing and drying the ppt. at low temp. If the following have never before been prepd: Ni(ClO₃)₂·3N₂H₄; Ni(ClO₄)₂·Ni(ClO₄)₂·NiClO₄·OH·5N₂H₄; Cd(ClO₄)₂·Cd(OH)₂·3N₂H₄·2H₂O. The hydrazinates of the metal chlorates are very sensitive and unstable explosives, the Cu compd. detonating on drying at room temp. The hydrazinates of the perchlorates are less sensitive especially that of Cd. They are more sol. in H₂O and hydrolyze readily. The results of the various tests made on the 21 compds. investigated are summarized in a tabulation together with results of comparison tests on several well-known primary and secondary explosives. These tests include ignition temp., sensitiveness to impact, Trauzl. lock test, and detn. of initiation charges required for TNT, tetryl and trinitroanisole. Methods of conducting the tests

VERYASOVA, M. P.

15-57-4-4122

TRANSLATION FROM: Referativnyy zhurnal, Geologiya, 1957, Nr 4, pp 11 (USSR)

AUTHORS: Tikhvin'skaya, Ye. I., Krupin, V. I., Sokolov, M. N., Vinokurov, V. M.,

Veryasova, M. P., Mal'kovskiy, F. M., Grigor'yeva, T. Ye.

TITLE: "Stratigraphy and Facies Relations in the Permian Deposits of the Tatarskaya ASSR
(Osnovy stratigrafii i fachial'nogo slozheniya permakikh otozheniy Tatarskoy ASSR)"

PUBLISHER: Uch. zap. Kazansk. gos. un-ta, 1955, Vol 115, Nr 10, pp 113-117

ABSTRACT: The Permian deposits of the Tatariya are divided into the Lower Permian (250 m to 300 m thick), represented by the Schwagerina, Tastuba and Sterlitamak horizons of the Saikmara stage, and also by the Artinskian and Kungurian stages. The authors point out the limited distribution of the Artinskian series, completely developed (80 m) only at the extreme eastern edge of Tatariya, where it is subdivided into two horizons. The lower of these two horizons is composed of anhydrite and dolomite. The Kungurian series also has a restricted distribution. It consists of carbonate-sulfate-clay deposits (up to 20 m). The Ufa series, with a thickness ranging from 0 to 140 m and more (on the east) is referred to the Upper Permian. The Kazanian deposits are separated into an upper and a lower Kazanian. The Yadrenogo Kamnya series occurs at the base of the upper Kazanian. The lower Kazanian sequence is divided into three horizons. In the "zone of upper piedmont deposits," these are insular, deltaic-littoral, and red-bed formations. The lower Kazanian rests on an eroded surface in the Ufa series or on the Lower Permian. There are intraformational erosional zones in the upper Kazanian, the largest of which subdivide the deposits into three principal rhythmic units. The Tatarian stage (200 m to 250 m thick) is divided into two substages. The upper substage shows evidence of strong surface erosion. The lower substage contains sediments formed in a residual freshened basin.

X VERYASOVA, M.P.

TIKHOVINSKAYA, Ye.I. (Kazan'); KRUPIN, V.I. (Kazan'); VINOGRADOV, V.M. (Kazan');
SOKOLOV, M.N. (Kazan'); VERYASOVA, M.P. (Kazan'); MAL'KOVSKIY, F.S.
(Kazan'); ORIGOR'DIEVA, T.Ye. (Kazan')

Stratigraphy and facies structure of Permian deposits in the Tatar
A.S.S.R. Uch.zap.Kaz.un. 115 no.10:113-117 '55. (MLRA 10:5)
(Tatar A.S.S.R.--Geology, Stratigraphic)

VERYASOVA, Z.A., assistant

Premature births according to clinical data for five years
(1956-1960). Nauch. trudy SamMI 22:118-127 '63.

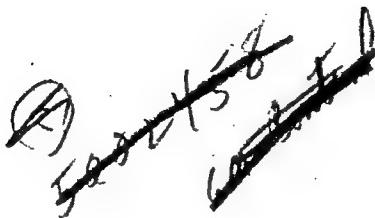
Vitamin C content in the blood of the mother and the fetus,
in the placenta and the urine in premature births.
Ibid.:128-132 (MIRA 17:9)

1. Iz kafedry akusherstva i ginekologii Samarkandskogo
meditsinskogo instituta.

VERYATIN, U.D.; MASHIREV, V.P.; RYABTSEV, N.G.; TARASOV, V.I.;
ROGUZKIN, B.D.; KOROBOV, I.V.; ZEFIROV, A.P., doktor
tekhn. nauk, red.; MURADOVA, A.A., red.

[Thermodynamic properties of inorganic substances; a manual]
Termodynamicheskie svoistva neorganicheskikh veshchestv;
spravochnik. Moskva, Atomizdat, 1965. 459 p. (MIRA 18:12)

VEKHTIN, Yury Davidovich - Sr Sci Assoc in the specialty of Tech-
nology of Rare and Non-Ferrous Metals -- 21 May 58, Prot No 25P
(BANVO, 10-58, 25)

A handwritten signature in black ink, appearing to read "Yury Davidovich Vekhtin". The signature is somewhat stylized and includes a small circle to the left.

PHASE I BOOK EXPLOITATION

SOV/3830

Galkin, N.P., A.A. Mayorov, and U.D. Veryatin

Tekhnologiya pererabotki kontsentratov urana (Technology of Processing Uranium Concentrates) Moscow, Atomizdat, 1960. 162 p. Errata slip inserted. 4,000 copies printed.

Ed.: T.P. Kalyuzhnaya; Tech. Ed.: Ye. I. Mazel',

PURPOSE: This book is intended for chemical engineers and technicians in uranium production.

COVERAGE: The book presents the theory and description of processes in the treatment of uranium concentrates to obtain pure salts and uranium metal. The authors discuss the applications of uranium, the properties of uranium and its ions in solution, methods for the production and refining of uranium concentrates, methods for the preparation of uranium tetrafluoride, the preparation of uranium metal, and measures for ensuring the safety of personnel in uranium manufacturing. The author also cites earlier books on uranium by Dzh. Kats and Ye. Rabinovich, S.Ye. Bresler, O.A. Songina, and I.P. Kislyakov. There are

Card 1/6

Technology of Processing Uranium Concentrates

SOV/3830

261 references: 91 Soviet, 101 English, 36 French, 27 German, 4 Italian, and
2 Swedish

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Ch. I. History of the Development of the Uranium Industry	7
Ch. II. Applications of Uranium	10
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1. Position of Uranium in D.I. Mendeleyev's periodic system	13
2. Electron configuration; atomic and ionic radii of uranium	14
3. Isotopic structure	14
4. Atomic weight of natural uranium	14
5. Structure and mechanical properties of uranium	15

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PHASE I BOOK EXPLOITATION

SOV/5820

Galkin, N. P., A. A. Mayorov, U. D. Veryatin, B. N. Sudarikov,
N. S. Nikolayev, Yu. D. Shishkov, A. B. Krutikov

Khimiya i tekhnologiya fтористых соединений урана (Chemistry and Tech-nology of Uranium Fluoride Compounds) Moscow, Gosatomizdat, 1961. 347 p.
Errata slip inserted. 4500 copies printed.

Ed. (Title page): N. P. Galkin, Doctor of Technical Sciences, Professor;
Ed.: N. A. Korobtsova; Tech. Ed.: S. M. Popova.

PURPOSE: This book is intended for chemical and nuclear engineers and
teachers and students of schools of higher education.

COVERAGE: The monograph reviews Soviet and non-Soviet literature published
up to June 1960 on the physicochemical properties of uranium fluorides
and methods of producing them from salts, oxides, and metallic uranium.
Methods of processing uranium chemical concentrates to the tetra- and hexa-fluorides, which are initial products in the production of nuclear fuel,

Card ~~28~~

Chemistry and Technology of Uranium (Cont.)

SOV/5820

are of primary interest. Fluoride methods are preferred to hydrometallurgical methods because radioactive waste solutions in the former are either reduced to a minimum or eliminated. No personalities are mentioned. References accompany individual chapters.

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27108

S/089/61/011/003/010/013
B102/B138

21.4100

AUTHORS: Galkin, N. P., Veryatin, U. D., Smirnov, Yu. V.

TITLE: Thermodynamics of the reduction of uranium tetrafluoride by calcium

PERIODICAL: Atomnaya energiya, v. 11, no. 3, 1961, 257-260

TEXT: The reaction $UF_4 + 2Me = U + 2MeF_2 + Q$ is generally used to obtain metallic uranium fluoride; Me = Mg or Ca. The case Me = Ca is considered here, and results are compared with those relative to reduction by means of Mg. The relation $\log K = \Delta F^\circ_T / 4.576 T$ holds for the equilibrium constant of this reaction. The change in the free energy of the reaction can be determined from the Gibbs-Helmholtz equation:

$$\Delta F^\circ_T = \Delta H^\circ_0 + \int_{T_0}^T \Delta C_p dT - T \Delta S^\circ_0 - T \left[\frac{\Delta C}{T} \right]_0^T dT.$$

Numerical values for the thermal effect are listed in Table 3. As may be

Card 1/3

Thermodynamics of the reduction...

S/089/61/011/003/010/013
B102/B138

seen, the thermal effect of the reaction grows rapidly from the boiling point of UF_4 (1417°C) and that of calcium (1690°C). While the thermodynamic calculation yielded 2000°C for the reduction reaction, the measurement showed 2000°C , which is considerably higher than the melting point of the slag (1418°C). This means that sufficient heat is liberated both for the melting and for heating the melt, so that no charge preheating is required when Ca is used for the reduction of UF_4 . The free energy, and, hence, also the equilibrium constant of the UF_4 reduction by Ca, diminishes with rising temperature. As may be seen from the data in Table 3, the reaction equilibrium has almost completely moved over to the righthand side of the reaction. Apart from the fact that magnesium is much cheaper, the reduction of UF_4 by calcium offers considerable advantages. There are 1 figure, 3 tables, and 9 references: 6 Soviet and 3 non-Soviet. The three references to English-language publications read as follows: Ref. 5: Metal Ind. 24, no. 7, 127 (1959); Ref. 7: O. Kubaschewski, E. Evans. Metallurgical Thermochemistry. London - New York, Pergamon Press, 1958; Ref. 9: A. Glasser. The Thermochemical Properties

Card 2/3

Thermodynamics of the reduction...

27108
S/089/61/011/003/010/013
B102/B138

of the Oxides, Fluorides and Chlorides to 2500°K. New York, ANL-5750, 1958.

SUBMITTED: April 27, 1960

Legend to Table 3: (1) Temperature,
(2) thermal effect, kcal/mole,
(3) free energy, kcal/mole; (4)
logarithm of equilibrium
constant.

Темпера- тура. К (1)	ΔH_f° , ккал/моль (2)	ΔG_f° , ккал/моль (3)	$\lg K$ (4)
298	-137,0	-134,3 (-80,1)*	98,40
500	-137,84	-132,1 (-77,8)	57,72
723	-138,0	-129,0 (-74,1)	39,17
938	-135,7	-126,3 (-70,7)	29,42
1000	-135,5	-125,7 (-69,4)	27,46
1049	-134,1	-125,3 (-68,7)	26,11
1123	-138,3	-124,8 (-67,4)	24,29
1300	-140,8	-122,0 (-65,0)	20,47
1405	-147,0	-120,6 (-60,0)	18,78
1424	-144,7	-120,3 (-59,2)	18,46
1500	-147,3	-118,9 (-54,0)	17,32
1690	-107,3	-114,9 (-44,8)	14,85
1963	-275,0	-101,5	11,30
2000	-274,9	-98,3	10,74
2273	-274,1	-74,2	7,13
2500	-273,5	-54,3	4,74

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S/089/62/012/006/015/019
B102/B104

AUTHORS: Galkin, N. P., Veryatin, U. D., Karpov, V. I., Braverman,
I. B., Fedoseyev, I. V.

TITLE: Thermodynamics of the reduction of uranium oxides and uranyl
fluoride by certain reducing agents

PERIODICAL: Atomnaya energiya, v. 12, no. 6, 1962, 531-533

TEXT: The reduction reactions of UO_2F_2 and higher uranium oxides were
calculated, and the reducibility of several reducing agents was assessed.
The reaction potentials were determined for the range 373-1173°K, using

the relation $\Delta Z_T = \Delta H_{298} - T\Delta S_{298} + \int_{298}^T \Delta c_p dT - \int_{298}^T \frac{\Delta c}{T} dT$.

The results are tabulated. UO_3 is reduced more easily than U_3O_8 . ΔZ_T is
greatest when NH_3 is used as reducing agent. The reducibility of CO
decreases with temperature. UO_2F_2 cannot be reduced by CO, but is reduced

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S/089/62/012/006/015/019
B102/B104

Thermodynamics of the reduction ...

by H₂ or NH₃. There are 2 figures and 2 tables.

SUBMITTED: September 11, 1961

Card 2/2

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CIA-RDP86-00513R001859610004-7"

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859610004-7

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DATE 10-22-2018 BY SP-1000

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859610004-7"

GALKIN, N.P., doktor tekhn. nauk; SUDARIKOV, B.N., kand. khim. nauk; VERYATIN, U.D., SHISHKOV, Yu.D.; MAYOROV, A.A.; BABUSHKINA, S.I., red.; TARASENKO, V.M., red.

[Uranium technology] Tekhnologija urana. Moskva, Atom-izdat, 1964. 395 p. (MIRA 17:12)

GLAKIN, N.P.; VERTYATIN, U.D.; KARPOV, V.I.; BRAVERMAN, I.B.; FEDOSEYEV, I.V.

Thermodynamics of the reduction of uranium oxides and uranyl
fluoride by some reducing agents. Atom. energ. 12 no.6:531-533
(MIRA 15:6)
Je '62.
(Uranium oxide) (Uranyl fluoride) (Reduction, Chemical)

VERYESHCHAGIN, L.F.

USSR/ Physical Chemistry - Thermodynamics, Thermochemistry.
Equilibrium. Physicochemical Analysis. Phase Transitions. B-8

Abs Jour : Referat Zhur - Khimiya, No 3, 1957, 7460

Author : Veryeshchagin, L.F. and Voronov, F.F.
Title : Variation of the Melting Point of Solid Ammonia at
High Pressures

Orig Pub : Zh. fiz. khimii, 1956, Vol 30, No 2, 329-333

Abstract : Apparatus is described for the determination of the mp curves under pressure using the sealed capillary method. The pressure dependence of the temperature of fusion T_{fus} of ammonia in the range 733-2912 atm has been determined. The experimental data are represented to an accuracy of 2 percent by the Simon-Gladtsel equation $\log(p/5,000) = 4.394464 \log T_{fus} - 6.366381$ and the equation $p = 16,290.0 - 310.22T_{fus} + 1.33044T_{fus}^2$ which fit the curve fairly well in the range 300-3,000 atm.

Card 1/1

- 90 -

Bv. Abs.

81-5, Building and Road-Making Materials.

General characteristics of a very large number of cement and some
selected samples of electric power stations. A. M. Vassallo and
V. V. Kostylev (JOURNAL OF POLYMER SCIENCE, 1949, Vol. XII, 10-11, 4-7;
JOURNAL OF POLYMER SCIENCE, 1950, Vol. XII, 20-21). The characteristics of slag cement
from the selected four large cement factories at power stations is described.
Of the three cements, 87, 90, and 93 percent, and also, only the
last is relatively hard, have characteristics which can be attributed to special
cement. At Novosibirsk power station a cement, equal in quality
to one based on ground granulated blast-furnace slag, through granule
 0.5 mm., but with a shorter setting time, is obtained with mixed
CaO 30, SiO₂ 20, Al₂O₃ 2, and slag 77%. Another cement contains slag
70. Purchased cement 87, and gypsum 2%.

GALKIN, I.P.; VERYTIN, U.D.; KARPOV, V.I.

Some physicochemical properties of ammonium uranyl penta-fluoride. Zhur. neorg. khim. 7 no.8:2020-2022 Ag '62.
(MIRA 16:6)

(Uranyl compounds)

VERTYULINA, L.N.; KORSHUNOV, I.I.; SOROKIN, Yu.A.

Reduction of bis-cumenechromium and bis-(*m*-diisopropylbenzene)
chromium iodides on a mercury dropping electrode. Zhur. ob.
khim. 35 no.7:1133-1139 Jl '65. (MIF A 18:8)

VERIZHENKO, Yevgeniy Petrovich [Verizhenko, Ye.P.]; BERGER, K.V.
[Berger, K.V.], red.; LEUSHCHENKO, N.L., tekhn. red.

[Collection of problems and exercises in the statics of
structures] Zbirnyk zadach i vprav iz statyky sponud. Vyd.2.,
perer. Kyiv, Derzhbudvydav URSR, 1962. 214 p.
(MIRA 16:3)

(Graphic statics)

VERZAKOV, D.M., inzh.

Training of welding engineers. Svar. proizv. no.6:43-44 Je '62.
(MIRA 15:6)
(Welding—Study and teaching)

PETROV, L.K., otv. red.; BELIYAY, K.I., red.; VERZAL, A.I., red.;
KORENEVICH, N.P., red.; KOROBENNIKOV, Yu.Ye., red.;
MORGUNOVA, G.M., tekhn. red.

[Building materials made of local raw materials] Stroitel'-
nye materialy iz mestnogo syria. Minsk, Izd-vo M-va vyshego,
srednego spetsial'nogo i professional'nogo obrazovaniia BSSR,
(MIRA 16:4)
1962. 199 p.

l. Minsk. Nauchno-issledovatel'skiy institut stroitel'nykh ma-
terialov UPS i SNKh BSSR.
(Building materials)

L 22180 AR FWT(a)/EWG(b)-2/EWG(j) Pe-4/Pw-4 RM

ACCESSION NR: AR4049234

S/0081/64/000/014/S070/S071

SOURCE: Ref. zh. Khimiya, Abs. 14S480

AUTHOR: Vaynshteyn, A. I.; Ponomarev, M. A.; Ravetskaya, D. Ya.; B
Shreder, A. G.

TITLE: Properties and application of polymer-based concretes and mortars 5

CITED SOURCE: Sb. Proiz-vos-troit. izdeliy iz plastmass. Minsk, Vyssh. slkola, 1963, 218-439

TOPIC TAGS: polymer based concrete, plastic concrete, polymer based mortar, plastic mortar, polymer concrete property, polymer concrete application, organic admixture,

TRANSLATION: The authors discuss the properties and fields of application of various types of concrete mixed with mineral and synthetic binders as a base. It is indicated that admixtures of low molecular weight organic substances

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I 22189-65

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ACCESSION NR: AR4049234

(i.e., surface active agents and plasticizers) or polymers strongly affect the properties of polymer-modified concrete, such as its physical and mechanical properties. For instance, changes in plasticity, decreased water absorption, significant improvements in strength and other phenomena are noted when divinyl styrene latex SKS-65GP, polyvinyl acetate emulsions, as well as phenylformaldehyde, urealmine, formaldehyde or phenolsulfural resins are used with cementitious materials. The article also gives an account of effects produced by organic admixtures on the properties of plastic concrete. For example, improved strength and lower water absorption of polymer gypsum containing thermosetting phenylformaldehyde resin is explained in terms of the latter filling the pores of the gypsum structure and of the additional reinforcement provided as the resin hardens. The article describes the properties of polymer-silicate light concrete on a base of an agglomerate silicate mixed with synthetic resins (furylaniline, ureaformaldehyde, phenylformaldehyde) added or on a base of silicon organic binders (i.e., water glass and silicon ethyl ether — silicate KS). The authors also review the literature concerning formulation of polymer-cement concrete and mortar, organo-mineral concrete (i.e.

Card 2/3

I 22189-65

ACCESSION NR: AR4049234

plastic concrete), the study of properties of these materials and the feasibility
of their use in construction. Z. Ivanova

SUB CODE: MT

ENCL: 00

Card 3/3

VERZAL, A.I., kand.khimicheskikh nauk

"Building materials (sand, gravel, and clay) of Smolensk Province" by I.N.Salov. Reviewed by A.I.Verzal. Stroi.mat. 7 no.6:3 of cover Je '61. (MIRA 14:7)
(Smolensk Province—Building materials) (Salov, I.N.)